**3GPP TSG RAN WG1 Meeting #100b-e                     R1-200xxxx**

**eMeeting, April 20 - 30, 2020**

**Agenda Item: 7.2.2.2.2**

**Source: Moderator (Charter Communications)**

**Title: Draft TP for TS 38.215 under Draft-100b-e-NR-unlic-NRU-InitAccessProc-03 [RRM/RLM]**

**Document for: Discussion and Decision**

# Introduction

Three email discussions have been sanctioned in RAN1#100b-e on initial access procedures for NR-U. This third discussion that aims to converge by 4/24 has the following scope:

[100b-e-NR-unlic-NRU-InitAccessProc-03] Email discussion/approval on following issues related to RRM/RLM by 4/23; if necessary, followed by endorsing the corresponding TPs by 4/28 – Amitav (Charter)

* TP to 38.215 for RSSI definition

These issues have been selected based on the preparatory discussion summarized in [14].

# Draft TP

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| **Definition** | Received Signal Strength Indicator (RSSI), comprises the linear average of the total received power (in [W]) observed only per configured OFDM symbol(s) and in the measurement bandwidth corresponding to the channelbandwidth [TS 37.213 §4.0] where the channel has the center frequency configured by *ARFCN-valueNR* , by the UE from all sources, including co-channel serving and non-serving cells, adjacent channel interference, thermal noise etc.  Higher layers configure the *ARFCN-valueNR* that lies on the channel raster in the case of shared spectrum channel access, the reference numerology, and the measurement duration i.e., which OFDM symbol(s) should be measured by the UE.  For frequency range 1, the reference point for the RSSI shall be the antenna connector of the UE. If receiver diversity is in use by the UE, the reported RSSI value shall not be lower than the corresponding RSSI of any of the individual receiver branches. |
| **Applicable for** | RRC\_CONNECTED intra-frequency,  RRC\_CONNECTED inter-frequency |

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| **Company** | **Views** |
| Nokia, NSB | Two comments about the TP:  - We are now confused by the “observed only per configured OFDM(s)” wording. Does it mean “overaged on per symbol basis for all configured symbol(s)” or “averaged over all configured symbol(s)” ?  - We do not think that 38.215 is the right place to provide the restriction “center frequency vs channel raster”. We suggest to remove such restriction from the TP. |
| LG Electronics | Similar view with Nokia   * RSSI is measured every OFDM symbol. * We don’t need to describe that ARFCN-valueNR corresponds to one of channel rasters defined for NR-U. 331 specification would be more right place to specify it.   Based on above comments, I suggest the following TP.  Received Signal Strength Indicator (RSSI), comprises the linear average of the total received power (in [W]) observed only per configured OFDM symbol and in the measurement bandwidth corresponding to the channel bandwidth [TS 37.213 §4.0] where the channel has the center frequency configured by *ARFCN-valueNR* , by the UE from all sources, including co-channel serving and non-serving cells, adjacent channel interference, thermal noise etc.  Higher layers configure the *ARFCN-valueNR*, the reference numerology, and the measurement duration i.e., which OFDM symbol(s) should be measured by the UE. |
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